

REMARKS

The present invention is a method of VoIP load management to assure voice quality in a packet switched network and a computer program embodied on a computer readable medium and executable by a computer for VoIP management to assure voice quality in a packet switched network. In accordance with an embodiment of the invention, a method of a VoIP load management to assure voice quality in a packet switched network comprises transmitting a ping request 520 to an originating gateway 20 by a gatekeeper 50; transmitting a ping IP address to a destination gateway by an originating gateway 540; echoing a reply to the originating gateway by the destination gatekeepers 560; determining a roundtrip time for transmitting the ping request and echoing the reply 570; and allowing access of a new VoIP call to the packet switched network when the roundtrip time is less than a predetermined value 580.

The Examiner's allowance of claims 1, 3-7, 9-12, 21 and 22 is noted with appreciation.

Claims 13-20 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent 6,515,964 (Cheung et al) in view of United States Patent 6,363,065 (Thornton et al). These grounds of rejection are traversed for the following reasons.

The Examiner's Response to Arguments in Section 3 is as follows:

- In the Remarks on pgs. 15-17 of the Amendment, the Applicant contends that the Cheung does not disclose the use of roundtrip delay in the VoIP call control method. The Applicant shows that Cheung's disclosure involves one-way delay between the source and destination of a transmission.

- The Examiner agrees that Cheung's disclosure of "total delay" is defined in one direction (emphasis added). The combination of Cheung, which upon further inspection does suggest the use of a ping in measuring delay (column 4, lines 20-22), with Thornton, which explicitly shows the use of a ping and echo for measuring round-trip delay, is used by the Examiner to show how VoIP call admission control is performed by utilizing a round-trip delay measurement obtained through timed transmission of a ping.
- In the Remarks on pg. 17 of the Amendment, the Applicant contends that the Examiner did not discuss dependent claims 14-16 and 18-20 in the previous office action.
- The Examiner addressed the claim limitations of dependent claims 14-16 and 18-20 in a single rejection that covers all of claims 13-20. The Examiner has addressed these dependent claims separately in this action to avoid further confusion for the Applicant.

Claim 13 recites:

A method of VoIP load management to assure voice quality in a packet switched network, comprising:
 transmitting a ping request to an originating gateway by a gatekeeper;
 transmitting a ping IP address to a destination gateway by the originating gateway;
 echoing a reply to the originating gateway by the destination gateway;
 determining a round trip time for transmitting the ping request and echoing the reply; and
 allowing access of a new VoIP call to the packet switched network when the round trip time is less than a predetermined value.

and claim 17 recites:

A computer program embodied on a computer readable medium and executable by a computer for VoIP load management to assure voice quality in a packet switched network, comprising:
 transmitting a ping request to an originating gateway by a gatekeeper;
 transmitting a ping IP address to a destination gateway by the originating gateway;
 echoing a reply to the originating gateway by the destination gateway;
 determining a round trip time for the transmitting the ping

request and echoing of the reply; and
allowing access of a new VoIP call to the packet switched
network when the round trip time is less than a predetermined value.

Claims 13 and 17 call for a combination of transmitting a ping request to an originating gateway by a gatekeeper; transmitting a ping IP address to a destination gateway to an originating gateway; echoing a reply to the originating gateway by the destination gateway; determining a roundtrip for transmitting the ping request and echoing the reply; and allowing access of a new VoIP call to the packet switched network when the roundtrip delay is less than a predetermined value. It is submitted that the Examiner's Response to Arguments does not demonstrate that this subject matter is taught by the combination of Cheung et al and Thornton et al.

The Examiner correctly acknowledges that Cheung's disclosure of total delay is in one direction. The Examiner then concludes that a ping is used in measuring the one-way delay. In this regard, what is stated in column 4, lines 18-21, is that "[t]hese network characteristic parameters can be determined by methods well known in the art...total delay is the time interval from when one party utters a sound when the other party hears the sound". It is therefore seen that the ping utilized by Cheung et al is not only based upon a one-way determination but further, does not meet the limitations of claim 13 and 17 of "transmitting a ping request to an originating gateway by a gatekeeper". The Examiner should note that the term "ping request" is not met or suggested to a person of ordinary skill in the art by the disclosure in Cheung of an audible tone. Moreover, the Examiner has not demonstrated and it is clear that there is no disclosure in Cheung et al of the claimed ping request being transmitted to a gatekeeper since there is no disclosure of any gatekeeper in Cheung et al. Therefore, even if a person of ordinary skill in

the art were to consider the one-way determination of delay by Cheung et al, a person of ordinary skill in the art would not be in possession of the claimed transmission of a ping request to a gatekeeper.

The Examiner relies upon column 26, lines 10-14, of Thornton et al as teaching a ping and an echo for measuring roundtrip delay. Lines 10-14 of column 26 of Thornton et al disclose "[f]or each such call, TASQ process 537 conventionally measures latency of the network communication for that call by regularly sending a 'ping' to the peer gateway associated with this call and measuring round-trip transit time". It is therefore seen from Fig. 5 that the TASQ process 537 does not meet the limitation of transmitting a ping request to an originating gateway by a gatekeeper. It is submitted that the Examiner has not demonstrated that Thornton et al disclose the aforementioned ping request between the gatekeeper and the originating gateway. Moreover, it is submitted that the Examiner has not demonstrated that a ping address is transmitted from a destination gateway by the originating gateway. The aforementioned disclosure in column 26 is merely a reference to a ping being sent from the TASU process 537 to a peer gateway which does not suggest anything pertaining to an originating gateway involving the transmission of the ping IP address to a destination gateway.

Moreover, it is submitted that the Examiner has not demonstrated that Thornton et al discloses echoing a reply to the originating gateway by a destination gateway. There is no disclosure in Thornton et al of the combination of a gatekeeper, an originating gateway and a destination gateway and the communications therebetween since the originating entity is described in column 26 as a TASQ process 537 and a peer gateway is the destination.

Accordingly, while the Examiner broadly asserts that Thornton et al cures the deficiencies of the one-way transmission time termination taught by Cheung et al which relies upon audible tones, in fact, a person of ordinary skill in the art would understand Thornton et al to only disclose as taught in column 26 determination of a latency of a network connection between the TASQ process to the peer gateway which does not meet the combination of the entities recited in claims 13 and 17 including an originating gateway, a gatekeeper and a destination gateway and the further combination of a ping request, a ping IP address and echoing a reply to the originating gateway.

There is no basis demonstrated in the record why a person of ordinary skill in the art would be led to modify the teachings of Cheung et al based upon Thornton et al to arrive at the subject matter of the independent claims except by impermissible hindsight.

Moreover, the dependent claims define further aspects of the present invention which are not rendered obvious by the proposed combination of Cheung et al and Thornton et al which is based upon impermissible hindsight.

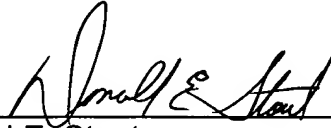
In view of the foregoing remarks, it is submitted that the claims of the application are in condition for allowance. Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the

filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (0172.38632X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Donald E. Stout", is written over a horizontal line.

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Attachments
DES:dlh